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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/010,426

11/08/2001

Brad R. Lewis

30014200-1006

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11/14/2006

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EXAMINER

KANG, INSUN

ART UNIT

PAPER NUMBER

2193

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/010,426</p>	<p>Applicant(s)</p> <p align="center">LEWIS ET AL.</p>	
	<p>Examiner</p> <p align="center">Insun Kang</p>	<p>Art Unit</p> <p align="center">2193</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed 8/14/2006.
 2. As per applicant's request, claims 29, 36, 44, 51, and 56 have been amended.
- Claims 29-56 are pending in the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 29-32, 34-39, 41, and 44-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US Pat. 5,963,972) hereafter Calder in view of Preiss ("Data Flow on a Queue Machine," 1987).

Per claim 29:

Calder discloses:

- generating a graph that represents a flow program comprising code segments distributed between the blocks of memory (i.e. col. 4 lines 29-35), the graph comprising nodes corresponding to selected ones of the blocks and arcs corresponding to dependency relationships between the nodes (i.e. col. 9 lines 35-56; col. 3 lines 55-62 col); and receiving an optimization command to manipulate the generated graph to improve performance of the flow program (i.e. col. 12 lines 25-53). Calder does not

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explicitly teach that the flow graph is a data flow graph. However, Preiss teaches a data flow graph representing data within blocks of memory was known in the pertinent art, at the time applicant's invention was made, to maximize parallelism (i.e. page 7 and 13).

It would have been obvious for one having ordinary skill in the art to modify Calder's disclosed system to use a data flow model. The modification would be obvious because one having ordinary skill in the art would be motivated to reduce execution time as suggested by Preiss (page 7 and 13).

Per claims 30-32, 34-35:

See the rejections corresponding to the claims in the previous office action.

In regard to claim 36:

Calder discloses: dividing a memory area into blocks and associating each block with at least a portion of the data and with at least one code segment, generating a graph representation of the flow program, the graph representation comprising nodes associated with the blocks, and arcs associated with dependencies between the blocks, and performing an optimization command to manipulate the graph to improve performance of the flow program (i.e. column 1, lines 41 - 58; column 3, line 56 to column 4, line 8). Calder does not explicitly teach that the flow graph is a data flow graph. However, Preiss teaches a data flow graph representing data within blocks of memory was known in the pertinent art, at the time applicant's invention was made, to maximize parallelism (i.e. page 7 and 13). It would have been obvious for one having ordinary skill in the art to modify Calder's disclosed system to use a data flow model.

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The modification would be obvious because one having ordinary skill in the art would be motivated to reduce execution time as suggested by Preiss (page 7 and 13).

Per claim 44, it is the computer-readable version of claim 36, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 36 above.

Per claim 51, it is the system version of claim 29, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 29 above.

Per claim 56, it is the system version of claims 29 and 36, respectively, and is rejected for the same reasons set forth in connection with the rejection of claims 29 and 36 above.

Per claims 37-39, 41, 45-50, and 52-55:

See the rejections corresponding to the claims in the previous office action.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 33, 40, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US Pat. 5,963,972) hereafter Calder as applied to

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claims 29-32, 34-39, 41, 44-56 above, in view of Preiss ("Data Flow on a Queue Machine," 1987), and further in view of Hamada et al. (US Patent 6,493,863) hereafter Hamada.

Per claims 33, 40, and 43: see the rejections corresponding to the claims in the previous office action.

7. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US Pat. 5,963,972) hereafter Calder as applied to claims 29-32, 34-39, 41, 44-56 above, in view of Preiss ("Data Flow on a Queue Machine," 1987), and further in view of Kahn et al. (US Patent 6,662,278) hereafter Kahn.

Per claim 42: see the rejection corresponding to the claim in the previous office action.

Response to Arguments

8. Applicant's arguments with respect to claims 29-56 have been considered but are moot in view of the new ground(s) of rejection.

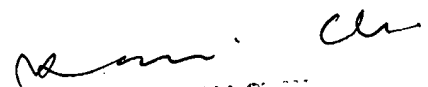
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-R 6:30-5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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